Amendments to the Claims

Following is a complete set of claims as amended with this Response. This complete set of claims excludes cancelled claims 68-75 and includes amended claim 67 and new claims 77-95.

1-66. (Cancelled)

67. (Currently Amended) A cardiac stimulation device to measure wall dynamics of a patient's heart, the device comprising:

a first pair of electrodes configured for placement internally in a the patient and in operable association with the patient's heart;

a current source operably associated with the first pair of electrodes and configured to produce a current therebetween;

a second pair of electrodes configured for placement internally in ~~a~~ the patient and in operable association with the patient's heart, ~~at least one of the electrodes of the second pair of electrodes being configured for placement in association with the left side of the patient's heart~~ each of the electrodes of the second pair associated with either the patient's left atrium or the patient's left ventricle;

a voltage measuring circuit operably associated with the second pair of electrodes and configured to measure a voltage therebetween responsive to the current produced by the current source;

an impedance measuring circuit configured for measuring myocardium impedance as a function of the current produced by the current source and the voltage measured by the voltage measuring circuit; and

a stimulation circuit associated with the impedance measuring circuit and configured to stimulate the patient's heart as a function of the measured myocardium impedance.

68-75. (Cancelled)

76. (Previously Presented) The cardiac stimulation device of claim 67, wherein the device comprises an implantable device.

77. (New) The cardiac stimulation device of claim 67, wherein the first pair of electrodes comprise a first electrode in the patient's right ventricle and a second electrode comprising a housing for the current source.

78. (New) A cardiac stimulation device to measure left atrial wall dynamics, the device comprising:

a first pair of electrodes configured for placement internally in a patient and in operable association with the patient's heart;

a current source operably associated with the first pair of electrodes and configured to produce a current therebetween;

a second pair of electrodes configured for placement internally in the patient and in operable association with the patient's left atrium;

a voltage measuring circuit operably associated with the second pair of electrodes and configured to measure a voltage therebetween responsive to the current produced by the current source;

an impedance measuring circuit configured to measure myocardium impedance as a function of the current produced by the current source and the voltage measured by the voltage measuring circuit; and

a stimulation circuit associated with the impedance measuring circuit and configured to stimulate the patient's heart as a function of the measured myocardium impedance.

79. (New) The cardiac stimulation device of claim 78, wherein the first pair of electrodes comprise a first electrode in the patient's right ventricle and a second electrode comprising a housing for the current source.

80. (New) The cardiac stimulation device of claim 78, wherein the device comprises an implantable device.

81. (New) The cardiac stimulation device of claim 78, further comprising a coronary sinus lead, the second pair of electrodes associated with coronary sinus lead.

82. (New) The cardiac stimulation device of claim 81, wherein the second pair of electrodes comprise a first ring electrode and a second ring electrode.

83. (New) The cardiac stimulation device of claim 78, further comprising a right ventricular lead, at least one of the first pair of electrodes associated with the right ventricular lead.

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84. (New) The cardiac stimulation device of claim 83, wherein the at least one of the first pair of electrodes is a ring electrode.

85. (New) A cardiac stimulation device to measure left ventricular wall dynamics, the device comprising:

a first pair of electrodes configured for placement internally in a patient and in operable association with the patient's heart;

a current source operably associated with the first pair of electrodes and configured to produce a current therebetween;

a second pair of electrodes configured for placement internally in the patient and in operable association with the patient's left ventricle;

a voltage measuring circuit operably associated with the second pair of electrodes and configured to measure a voltage therebetween responsive to the current produced by the current source;

an impedance measuring circuit configured to measure myocardium impedance as a function of the current produced by the current source and the voltage measured by the voltage measuring circuit; and

a stimulation circuit associated with the impedance measuring circuit and configured to stimulate the patient's heart as a function of the measured myocardium impedance.

86. (New) The cardiac stimulation device of claim 85, wherein the first pair of electrodes comprise a first electrode in the patient's right ventricle and a second electrode comprising a housing for the current source.

87. (New) The cardiac stimulation device of claim 85, wherein the device comprises an implantable device.

88. (New) The cardiac stimulation device of claim 85, further comprising a coronary sinus lead, the second pair of electrodes associated with coronary sinus lead.

89. (New) The cardiac stimulation device of claim 88, wherein the second pair of electrodes comprise a left ventricular tip electrode and a left ventricular ring electrode.

90. (New) The cardiac stimulation device of claim 85, further comprising a right ventricular lead, at least one of the first pair of electrodes associated with the right ventricular lead.

91. (New) The cardiac stimulation device of claim 90, wherein the at least one of the first pair of electrodes is a ring electrode.

92. (New) A cardiac stimulation device to measure left ventricular wall dynamics of a patient's heart, the device comprising:

a first electrode and a second electrode configured for placement internally in the patient and in operable association with the patient's left ventricle;

a current source coupled to the first electrode and the second electrode to produce a current therebetween;

a voltage measuring circuit coupled to the first electrode and the second electrode to measure a voltage therebetween responsive to the current produced by the current source;

an impedance measuring circuit configured to measure myocardium impedance as a function of the current produced by the current source and the voltage measured by the voltage measuring circuit; and

a stimulation circuit associated with the impedance measuring circuit and configured to stimulate the patient's heart as a function of the measured myocardium impedance.

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93. (New) The cardiac stimulation device of claim 92, wherein the device comprises an implantable device.

94. (New) The cardiac stimulation device of claim 92, further comprising a coronary sinus lead, the first electrode and the second electrode associated with coronary sinus lead.

95. (New) The cardiac stimulation device of claim 92, wherein the first electrode is a left ventricular tip electrode and the second electrode is a left ventricular ring electrode.